REMARKS

The Examiner rejected claim 1 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No 7,024,193 to Tuutijarvi in view of alleged admitted prior art of the instant application. The Examiner stated, "[the] Examiner considers DTC/DCCH frame as either DTX-high or DTX-low state (class)." Those of skill in the art understand DCCH are inapposite to DTX.

Discontinuous Transmission is well known in the wireless communication art. Wikipedia defines it as (http://en.wikipedia.org/wiki/Discontinuous_Transmission):

> Discontinuous transmission (DTX) is a method of momentarily powering-down, or muting, a mobile or portable wireless telephone set when there is no voice input to the set. This optimizes the overall efficiency of a wireless voice communications system. In a typical two-way conversation, each individual speaks slightly less than half of the time. If the transmitter signal is switched on only during periods of voice input, the duty cycle of the telephone set can be cut to less than 50 percent. This conserves battery power, eases the workload of the components in the transmitter amplifiers, and reduces interference.

Applicant defines the term precisely the same way at p. 1, lines 6-17:

> Discontinuous transmission (DTX) is a technique commonly used in wireless communications systems to reduce interference and conserve battery power. In conventional mobile communication networks, the mobile terminal transmits continuously on the uplink during a call. Normal conversation, however, contains a number of pauses between periods of speech, such as when a user listens to the other party. When a mobile terminal user is not speaking, transmission of the radio signal is not required from an information point of view. With discontinuous transmission, pauses in normal speech are detected in order to suspend radio transmission for the duration of the pause. Discontinuous transmission is typically an optional feature that can be enabled or disabled by the network as required. When used, discontinuous transmission can reduce air traffic, reduce interference between users, and extend battery life in mobile terminals.

Applicant further defines the terms DTX-high and DTX-low at p. 1, line 18 – p. 2, line 5:

> During the periods during which no voice activity is detected, a transmitter may transmit nothing, or may transmit truncated bursts containing only radio control information. The transmission of at least some truncated bursts is desirable, to maintain a connection between the mobile terminal and the base station serving it, and to transmit control information. In either case, <u>the state in which truncated bursts are transmitted is known as a DTX-low state; the state in which normal, full-length bursts are</u>

> transmitted is known as a DTX-high state. The respective formats of a DTX-high, or normal, burst containing voice or data along with control information, and a DTX-low, or truncated, burst containing only control information, typically differ significantly. The wireless system receiver should be able to distinguish between the two, as the two types of burst transmissions are formatted differently, and the speech decoder will perform different operations based on whether the received data contains speech or random noise.

In the context of this definition, DTX-high refers to a normal, full-length burst **of voice information**; DTX-low refers to a truncated burst **of voice information**. No other interpretation is reasonable, and the claim must be construed with this meaning of the terms.

Tuutijarvi discloses identifying a transmitting base station for the purposes of measuring Observed Time Differences of Arrival by extracting the CDVCC code from a Digital Traffic Channel (DTC) and comparing it to that received in the neighborhood list. The CDVCC code is not included in the Digital Control Channel (DCCH), which is used to actually perform the measurement.

The Digital Traffic Channel (DTC) is defined in TIA/EIA-136-131-A, and one frame structure thereof is depicted in Tuutijarvi in Fig. 2. The two, 130-bit segments labeled DATA may carry digitized voice data, which may or may not be suppressed using Discontinuous Transmission.

The Digital Control Channel (DCCH) is defined in TIA/EIA-136-121-A, the frame structure of which is depicted in Tuutijarvi in Fig. 3. A control channel carries control and "overhead" information between the base station and mobile terminal to communicate frequencies, network identifiers, synchronization information, and the like. Control channels do not carry traffic (end-user voice or data); traffic channels carry traffic. Newton's Telecomm Dictionary, 21st ed., defines DCCH as, "Digital Control CHannel. A channel used in most newer digital cellular and PCS systems for signal and control purposes between the mobile terminal device and the radio base station." p. 240 (emphasis added). In contrast, Newton's defines DTC as, "Digital Traffic Channel. A digital cellular term. Defined in IS-136, the DTC is the portion of

the air interface which carries the actual data transmitted. The DTC operates over frequencies separate from the DCCH (Digital Control CHannel), which is used for signaling and control purposes." p. 282 (emphasis added).

Those of skill in the art readily understand that, in wireless communication systems, traffic channels carry traffic (such as voice signals), and control channels carry control information. Control channels do not carry user traffic. Accordingly, control channels do not carry voice information. Although the Examiner did not state which of the DTC/DCCH he equates to DTX-high and which is DTX-low, it does not matter because the DCCH does not carry either full-length or truncated voice information. It does not carry voice information at all; only traffic channels carry voice in DTX-high and DTX-low frames. Tuutijarvi does not teach or suggest distinguishing between DTX-high and DTX-low states of a received DTC frame. Accordingly, the combination of Tuutijarvi with the Background discussion of Applicants' specification fails to teach or suggest the limitations of claim 1, and the § 103 rejection thereof must be withdrawn.

Furthermore, Tuutijarvi fails to teach or suggest, "computing a first value representing a confidence-weighted correlation between said known bit pattern and data from a first position of said frame." Tuutijarvi simply extracts the CDVCC from a known position in a DTC frame to verify that it has the correct frequency, and that the DTC is sent by the proper base station. See col. 6, line 66 – col. 7, line 8:

> At Step C the mobile station 10 verifies that the frequency channel is a correct frequency channel transmitted by the neighbor base station to be measured by receiving a traffic channel [DTC] that is on the same frequency channel, and by extracting from the received traffic channel certain information [CDVCC] that can be used to identify the base station that transmits the traffic channel. At Step D the mobile station 10 compares the extracted information with the information used for identifying the neighbor base stations that transmit frequency channels received in the measurement list, and thus ensures that the correct frequency channel is being received.

That is, Tuutijarvi simply extracts the CDVCC from a known bit position in the DTC frame and compares it to the corresponding CDVCC stored in a neighbor list, to verify it is operating with the correct frequency channel. Tuutijarvi is completely silent about computing a confidence-weighted correlation between a bit pattern and data extracted from a known position in a frame. Those of skill in the art known that no confidence-weighted correlation would be necessary or useful for the simple comparison that Tuutijarvi performs – a simple bit-wise AND function (or software comparison) would be sufficient. For at least the additional reason that Tuutijarvi fails to teach or suggest the correlation operation, the § 103 rejection must be withdrawn.

The Examiner rejected claims 2, 7, and 11 under 35 U.S.C. § 103 as being unpatentable over Tuutijarvi and admitted prior art in combination with U.S. Patent No 7,024,193 to Sato. Sato fails to cure the deficiency of Tuutijarvi and Applicants' specification to teach or suggest all claim limitations. Nevertheless, applicants briefly traverse this rejection. Sato discloses a system for discontinuous transmission of digital speech signals in a wireless communication system. When speech is present (*i.e.*, DTX-high), a mobile terminal transmits the digitally encoded speech in a 324-bit data frame, the structure of which is depicted in FIG. 1(b). See col. 3, lines 38-43. During periods when no speech is present (*i.e.*, DTX-low), the mobile terminal transmits a 68-bit data frame containing only guard bits and two synch patterns, as depicted in FIG. 1(c). See col. 3, lines 43-52.

Claim 1 recites determining whether a received data frame is DTX-high or DTX-low, where a known bit pattern is located in a different respective position within the data frame in the two cases, by computing a first confidence-weighted correlation between the known bit pattern and data from a first position of the frame. That is, claim 1 "looks for" a known bit pattern in a first position. Claim 2 recites further computing a second confidence-weighted correlation between the same known bit pattern and data from a second position of the frame (different from the first position). That is, claim 2 "looks for" the known bit pattern in a different, second

position of the frame. For a given received frame (which can only be one of DTX-high or DTX-low, and hence have the known bit pattern in only one position), one of the correlations will be very high and the other will be very low. The two facts together allow for a higher overall confidence in classifying the frame.

As nearly as Applicants understand the Examiner's rejection, the Examiner has equated the second correlation result to "either SYNC(1) or SYNC(2)." The Examiner then stated, "the first position is considered as a whole frame position either 68 bits or 324 bits," without specifying which it is – 68 bits or 324 bits? The Examiner then stated, "second position is the SYNC(1) or SYNC(2) position inside the frame," again, without stating which it is. So, apparently, the Examiner's position is that Sato teaches correlating a known bit pattern (which the Examiner declines to identify) to, first, the entire frame, and second, to the SYNC(1) or SYNC(2) position (both of which exist <u>only</u> in the case of a DTX-low frame). The result of the second correlation operation is, oddly enough, the value of either SYNC(1) or SYNC(2) – the data against which the known value was correlated. Sato then uses this value to classify the frame. This is not only nonsensical, it has absolutely nothing to do with what Sato <u>actually</u> discloses.

Sato determines a DTX-high or DTX-low frame based on the frame length: 68 bits or 324 bits. See FIG. 5, decision block S202, and col. 6, lines 16-23:

> [T]he TDMA processor 16 and the main controller 21 judge whether the uplink signals represent a time slot in an active speech period or one in a silent period (step S202). <u>This judgment is based on whether the data length of the time slot is 324 bits or 68 bits</u>. Thus, if the data length of the time slot is 324 bits, the time slot is an active speech period, or if it is 68 bits, the period is a silent one (See FIGS. 1 (b) and (c)).

This alone defeats the Examiner's rejection, as claim 2 recites, "<u>classifying</u> said frame as being a DTX-high or DTX-low class is <u>additionally based on said second value</u>." Sato does not teach that SYNC(1) or SYNC(2) is considered at all in classifying the frame as DTX-high or DTX-low. Rather, SYNC(2) is <u>only</u> processed (Fig. 4, block S107) if the frame is DTX-low (Fig. 4, block

S103). See also, Fig. 5, where blocks S203 and S205 (detect SYNC(1) and SYNC(2), respectively) are reached only if the frame length is 68 bits and after that determination is made, at block S202 (that is, if it is determined to be a DTX-low frame).

The rejections based on the teachings of Sato thus fail to support a *prima facie* case of obviousness, and the § 103 claims must be withdrawn. All pending claims define patentably over the art of record, and are in condition for allowance, which action is hereby respectfully requested.

Respectfully submitted,

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BREAKER OFF
See also RTU.

DBIT Also called D-BIT. The delivery confirmation bit in an X.25 packet that is used to indicate whether or not the DTE wishes to receive an end-to-end acknowledgment of delivery. In short, a bit in the X.25 packet header that assures data integrity between the TPAD and the HPAD.

dBm dBm is used to describe the relative power of a transmitter and the sensitivity of a receiver. It is defined as Decibel (dB) ratio (log10) of Watts (W) to one milliwatt (1mW). In other words, the output power of a signal referenced to an input signal of 1mW (milliWatt). Similarly, dBm0 refers to output power, expressed in dBm, with no input signal. (0 dBm = 1 milliwatt and -30 dBm = 0.001 milliwatt). See also dB and Decibel.

dBm0 Identifier meaning "decibels referred to one milliwatt and corrected to a zero dBm effective power level;" used to state the relation of a signal level on a transmission line at other than a one-milliwatt point.

dBmp An identifier meaning decibels below reference noise referred to one milliwatt using psophometric weighting, dBmp is the ITU-T method for noise measurements. dBmp has a variance of approximately 2 dB from dBrn methods. See also dBrn.

DBMS Database management system. A computer program that manages data by providing the services of centralized control, data independence, and complex physical structures. Advantages include efficient access, integrity, recovery, concurrency control, privacy, and security. A DBMS enables users to perform a variety of operations on data, including retrieving, appending, editing, updating, and generating reports.

dBmV A decibel measure in relation to one millivolt across a specific impedance. In CATV the impedance used is 75 ohms. See Cable TV.

dBrn DeciBels above Reference Noise. A ratio of power level in dB relative to a noise reference. dBrnC uses a noise reference of -90 dBm, as measured with a noise meter, weighted by a frequency function known as C-message weighting which expresses average subjective reaction to interference as a function of frequency. dBrn is used mostly in North American telecommunications work. See also dB and dBmp.

dBrnC An identifier meaning deciBels above Reference Noise using C-message weighting. The measurement is accomplished through a filter approximating a type C voice messaging channel, and is the North American nomenclature for a DDD (Direct Distance Dialing) trunk channel. The reference is 90 dB below one milliwatt of power. See also dBrn and dBrnC0.

dBrnC0 Pronounced "de-brink-o," it is an identifier meaning deciBels above Reference Noise using a filter approximating a type C voice messaging channel adjusted for equivalence to a 0 dBm equivalent circuit point. It is the same as dBrnC, except that it is corrected to a TLP (Transmission Level Point) of 0dB. See also dBrnC and TLP.

DBS Direct Broadcast Satellite. A term for a satellite which sends relatively powerful signals to small (typically 18-inch diameter) dishes installed at homes. See C Band, 1994 and Direct Broadcast Satellite.

DBU 1. Dial Back-Up. A method of providing redundancy in the event of the failure of a leased line or even a network, dial back-up automatically re-establishes the connection through the PSTN (Public Switched Telephone Network) on a dial-up basis. For example, ISDN commonly is used for dial back-up for Frame Relay networks.

2. Decibels below 1uW. Decibels relative to microwatts. See also dB.

dBuV Decibel ratio of Volts to one microvolt. See also dB and Decibel.

dBW A decibel measure referenced to one watt without reference to any impedance.

DC 1. Direct Current. The flow of free electrons in one direction within an electrical conductor, such as a wire. The current may be constant or it may pulsate, but it always is in one direction. See also AC.

2. Delayed Call.

DC Block A device which blocks direct current but passes radio frequencies, audio frequencies, or alternating current depending upon the function of the block.

DC Power Supply See Power Supply.

DC Signaling A collection of ways of transmitting communications signals using direct current—the type of current produced by a dry cell household "D" cell battery. DC signaling is only used on cable. It's an out-of-band signal.

DCA 1. Defense Communication Agency. The U.S. government agency under the DOD (Department of Defense) that was responsible for installation and operation of Defense Data Networks, including the ARPANET and MILNET, and PSNs. DCA was folded into DISA (Defense Information Systems Agency) in 1991. See also DISA.

2. Document Content Architecture. The IBM approach to storing documents as two types of document group: draft documents and final form documents. For presentation, the draft document is transformed into a final document through an office system.

DCAS Direct Carrier Administration System.

DCC 1. Data Communications Channel. Channels contained within section and line overhead used as embedded operations channels to communicate to each network element. An AT&T SONET term.

2. An ATM term. Data Country Code: This specifies the country in which an address is registered. The codes are given in ISO 3166. The length of this field is two octets. The digits of the data country code are encoded in Binary Coded Decimal (BCD) syntax. The codes will be left justified and padded on the right with the hexadecimal value "F" to fill the two octets.

3. Digital Compact Cassette. A digital version of the familiar analog audio cassette. A DCC recorder can play and record both analog and digital cassettes. But the digital ones will sound a lot better.

4. Digital Cross-Connect.

DCCH Digital Control CHannel. A channel used in most newer digital cellular and PCS systems for signal and control purposes between the mobile terminal device and the radio base station. See also Cellular and PCS.

DCD 1. Data Carrier Detect. Signal from the DCE (modem or printer) to the DTE (typically your PC), indicating it (the modem) is receiving a carrier signal from the DCE (modem) at the other end of the telephone circuit.

2. Dynamically Configurable Device. A dynamically configurable device is a fancy name for a Plug and Play device, so-called because you don't have to reboot the system after installing one.

3. Duty Cycle Distortion. See Jitter.

DCE 1. Data Communications Equipment. Also known as DCTE (Data Circuit Terminating Equipment). The classic definition of DCE is that it resolves issues of interface between Data Terminal Equipment (DTE) and a transmission circuit. Examples include LAN Network Interface Cards (NICs), CSUs and DSUs, modems, and ISDN Terminal Adapters (TAs). DCE may accomplish such functions as changes in electrical coding schemes, electro-optical conversion, and data formatting. The physical interfaces between DTE and DCE can take a variety of forms, one of which is the RS-232 "standard" developed by the Electronic Industries Alliance (EIA). The main difference between a DCE and DTE in RS-232 is the wiring of pins two and three in the male and female 25-pin connectors. But there is, of course, no standardization. When wiring one RS-232 device to another, it's good to know which device is wired as a DCE and which as a DTE. But it's actually best to go straight to the wiring diagram in the appendix of the device's instruction manual. Then you compare the wiring diagram of the device you want to connect and build yourself a cable that takes into account the peculiar (i.e., strange) vagaries of the engineers who designed each product. In short, with an RS-232 connection, the modem is usually regarded as DCE, while the user device (terminal or computer) is DTE. In a X.25 connection, the network access and packet switching node is viewed as the DCE. DCE devices typically transmit on pin 3 and receive on pin 2. DTE (Data Terminal Equipment) devices typically transmit on pin 2 and receive on pin 3. See also DTE and RS-232. See also the Appendix for an excellent graphic representation of the RS-232 pinout.

2. Distributed Computing Environment. An industry-standard, vendor-neutral set of distributed computing technologies developed by the Open Software Foundation (OSF). According to The Open Group, successor to the OSF, DCE provides security services to protect and control access to data, name services that make it easy to find distributed resources, and a highly scalable model for organizing widely scattered users, services and data. DCE runs on all major computing platforms, supporting distributed applications in heterogeneous hardware and software environments.

DCE-RPC Distributed Computing Environment Remote Procedure Call. A Microsoft implementation of a portmapping service. A portmapper is a service that runs on a specific port, redirecting clients that send a request to that port. These initial calls typically result in a response from the trusted machine that redirects the client to a new port for the actual service the client wants. See also RPC.

DCG Dispersion Compensation Grating. DCG overcomes the distortion of optical signals as they are transmitted through a network. Instead of trying to compensate for large amounts of signal dispersion at the end of a network, DCG periodically removes the distortion where needed along the transmission line. See Solitons.

DCH D-Channel Handler.

DCLEC A CLEC which specializes in delivering only data, most typically DSL services. See CLEC.

DT Direct termination. DT allows long distance carriers to bypass the LEC and terminate the switched traffic over dedicated (non-LEC) facilities to the customer premises. Direct termination calls are routed using six or ten-digit screening in the terminating long distance switch.

DTC 1. Digital Trunk Controller. See also STC.

2. Digital Transmit Command.

3. Digital Traffic Channel. A digital cellular term. Defined in IS-136, the DTC is the portion of the air interface which carries the actual data transmitted. The DTC operates over frequencies separate from the DCCH (Digital Control CHannel), which is used for signaling and control purposes. See also DCCH and IS-136.

DTD Document Type Definition often used in relationship with the Extensible Markup Language (XML). See cXML, SMGL, XML, and XML Schema.

DTE Data Terminal Equipment. A terminal device in the data world. DTE is part of a broader grouping of equipment known as CPE (Customer Premises Equipment), which includes voice, as well as data, terminals. At the terminal end of a data transmission, DTE comprises the transmit and receive equipment. DTE can be in the form of a dumb terminal (i.e., a terminal without embedded intelligence in the form of programmed logic), a semi-intelligent terminal, or an intelligent host computer (i.e., a PC, mid-range or mainframe computer). DTE interfaces to a circuit through DCE (Data Communications Equipment). See DCE and DTE.

DTE-DCE Rate Data terminal equipment/data communications equipment rate. A designation for the maximum rate at which a modem and a PC can exchange information, expressed in kilobits per second (kbps). For maximum performance, a modem must support a DTE-DCE rate in excess of its maximum theoretical throughput.

DTF DTF is the reason I hate acronyms. In telecom DTF could and does stand for digital trunk frame, digital transmission facility or dial tone first. Now you know why I avoid defining every single, made-up acronym under the sun. You and I could sit in a room and think of ten more acronyms for DTF and fill up even more space with more useless words. Enough already.

Dterm A line of proprietary electronic phones made by NEC for use with its PBXs. The Dterm terminal derives its intelligence from its own microprocessor, which detects events and accepts direction from the PBX.

DTH Direct To Home. Intended as a replacement for C-band satellite systems, DTH was proposed to operate on medium-powered FSS (Fixed Satellite Systems) in the Ku-band. DTH was superseded by DBS (Direct Broadcast Satellite), which allows the use of even smaller receive antennas than possible with DTH. See also Direct Broadcast Satellite and KU Band.

DTI Digital Trunk Interface.

DTL An ATM term. Designated Transit List: A list of nodes and optional link IDs that completely specify a path across a single PNNI peer group.

DTL Originator An ATM term. The first switching system within the entire PNNI routing domain to build the initial DTL stack for a given connection.

DTL Terminator An ATM term. The last switching system within the entire PNNI routing domain to process the connection and thus the connection's DTL.

DTLBX Dial Tone Line.

DTLU Digital Trunk and Line Unit. Provides system access for T1-carrier lines used for inter office trunks or remote switching module umbilicals.

DTM According to www.netinsight.se, DTM (Dynamic synchronous Transfer Mode)is a network protocol for high speed networking developed for dynamic transport of integrated traffic. It is a transport network architecture based on circuit-switching augmented with dynamic reallocation of bandwidth. The protocol is designed to be used in integrated services networks. It supports point-to-point, multicast and broadcast communication, i.e. a DTM network will be used for both distribution and unicast communication. DTM includes switching and a signaling protocol and can thus, in contrast to say SDH/SONET, set up multi-rate channels (circuits) on demand, and the capacity of a channel can be changed according to traffic characteristics during operation. Additionally, resources can be reallocated between nodes according to the current demands. In this way, free bandwidth is allocated to nodes with highest demands, providing an autonomous and efficient dynamic infrastructure.

DTMF Dual Tone Multi-Frequency. A fancy term describing push button or Touchtone dialing. (Touchtone is a not registered trademark of AT&T, though until 1984 it was.) In DTMF, when you touch a button on a push button pad, it makes a tone, actually a combination of two tones, one high frequency and one low frequency. Thus the name Dual Tone Multi Frequency. In U.S. telephony, there are actually two types of "tone" signaling, one used on normal business or home pushbutton/touchtone phones, and one used for signaling within the telephone network itself. When you go into a central office, look for the test board. There you'll see what looks like a standard touchtone pad. Next to the pad there'll be a small toggle switch that allows you to choose the sounds the touchtone pad will make—either normal touchtone dialing (DTMF) or the network version (MF).

The eight possible tones that comprise the DTMF signaling system were specially selected to easily pass through the telephone network without attenuation and with minimum interaction with each other. Since these tones fall within the frequency range of the human voice, additional considerations were added to prevent the human voice from inadvertently imitating or "falsing" DTMF signaling digits. One way this was done was to break the tones into two groups, a high frequency group and a low frequency group. A valid DTMF tone has one tone from each group. In other words, each DTMF tone has two tones. Here is a table of the DTMF digits with their respective frequencies. One Hertz (abbreviated Hz.) is one cycle per second of frequency.

When you touchtone, each button makes a sound that is the combination of two tones. Here's how to figure out what they are. They were deliberately designed so people couldn't whistle them.

How each touchtone button makes two tones

					Low Tones
	1	2	3	A	697Hz
	4	5	6	B	770Hz
	7	8	9	C	852Hz
	*	0	#	D	941Hz
High Tones	1209Hz	1336Hz	1477Hz	1633Hz	

Normal telephones (yours and mine) have 12 buttons, thus 12 combinations. Government Autovon (Automatic Voice Network) telephones have 16 combinations, the extra four (those above) being used for "precedence," which in Federal government parlance is a designation assigned to a phone call by the caller to indicate to communications personnel the relative urgency (therefore the order of handling) of the call and to the called person the order in which the message is to be noted. See also LONG TONES and the four following definitions.

DTMF Automatic Routing This is a term relating to a fax server operating on a Novell file server. In this system, the fax software assigns a four-digit number to each user. A fax sender dials the fax line, and after the fax server answers, it sends a special auto routing request signal. The sender dials the four-digit number for the correct user, and the fax is automatically sent to the user's workstation on the LAN.

DTMF Cut-Through The capability of a voice response system to receive DTMF tones while the voice synthesizer is delivering information, i.e. during speech playback. This capability of DTMF cut-through saves the user waiting until the machine has played the whole message (which typically is a menu with options). The user can simply touchtone his response anytime during the message—when he first hears his selection number, when the message first starts, etc. When the voice processor hears the touchtoned selection (i.e. the DTMF cut-through), it stops speaking and jumps to the chosen selection. For example, the machine starts to say, "If you know the person you're calling, touchtone his extension in now." But before you hear the "If you know" you push button in 230, which you know is Joe's extension. Bingo, the message stops and Joe's extension starts ringing. DTMF Cut-Through is also known as touchtone type-ahead.

DTMF Register A printed circuit card in a switch that converts the DTMF signals coming from the phone into signals which can be used by the switch's stored program control, central computer to do its switching, etc.

DTMF To Dial Pulse Conversion A PBX feature. DTMF (push button) phones are very popular. But sometimes you install a PBX with push button phones in an area which doesn't have a central office which will respond to push button tones. It's old. In this case, anyone dialing on a push button phone will find that the PBX converts that dialing to rotary pulsing when the PBX accesses a trunk which can't handle push button dialing. All this doesn't speed up the time the call takes to get through. It just speeds up the user's dialing and makes him or her feel she is dealing with a more modern phone system.

DTO Dial Tone Office.

DTP DeskTop Publishing.